ANNEX P

POWER OUTAGES

I. OVERVIEW

This Annex is intended to address the basic questions of how the City of San Jose intends to respond to power outages. Due to the widespread, yet uncertain, nature of this event, coupled with the unknown effects of infrastructure interdependencies, this plan attempts to address impacts on public safety and continuity of government operations.

The City of San Jose responds to emergencies and disasters using the Standardized Emergency Management System (SEMS). SEMS consists of several levels which are activated, as necessary, starting at the field response level and then gradually increasing as more resources or assistance are necessary to the local government Emergency Operations Center (EOC) level, the operational area (county) level, the regional EOC level, and finally to the state EOC level. This "bottom up" system supports the responsibility of local government to protect their citizens while permitting "top down" sharing of resources, alerts, warnings and intelligence.

A. Purpose

The purpose of this Annex is to address special considerations posed by the Energy Shortage and associated rolling blackouts. This Annex is not meant to supplant existing plans and procedures, but to strengthen existing capabilities for responding to power outages. This document will be used in conjunction with the Emergency Operations Plan, which further describes the structure and role of the City's Emergency Management Organization during any emergency, and ensures effective interagency coordination in accordance with the Standardized Emergency Management System (SEMS).

B. Objectives

The overall objectives of emergency energy operations will be to:

- ***** Aggressively monitor the progress of the energy emergency.
- * Maintain contact and liaison with energy supply providers.
- * Assist in procuring and distributing essential energy resources to support emergency operations.
- * Monitor the distribution of essential energy supplies.
- * As required, coordinate energy suppliers to prioritize and support emergency restoration of disrupted city services.
- * Provide liaison with all levels of government according to the Standardized Emergency Management System (SEMS) in order to provide an organized systems approach to emergency energy operations.

* Provide accurate and timely information regarding City services for dissemination to the public.
* Maintain energy capabilities to support essential City systems and City services.
* Work in unison with the California Energy Shortage Contingency Plan.

C. Background and Scope

The emergency management community is concerned with both short-term power outage consequences as well as longer-term impacts. Security and safety issues at large venues and retail establishments, for example, present short-term concerns. Longer-term impacts can be anticipated if disruptions continuously occur in utility, transportation, health care, communications systems and commerce.

As a result of this situation, OES and other agencies responsible for disaster preparedness, response, and recovery must focus on two areas: 1) promoting preparedness by individuals in both the public and private sectors, and 2) planning specifically for the impacts of rolling blackouts and power outages on City services.

Power Outages as Part of Disaster Planning and Response

Specific to the energy crisis will be the perception or reality of scarce resources available for use in assisting local governments. In this sense OES' State Operations Center (SOC), the three administrative regions, and the law/fire mutual aid systems may be put through the most strenuous test since the inception of SEMS. Effective communication and prioritization of resources will be key challenges for the Regional Emergency Operations Centers (REOCs) and SOC in such an environment.

Also important to the energy crisis will be the need for insightful intelligence from state, regional and local sources to describe the effects of power loss throughout the state. Local governments will require this information to prepare themselves for impacts that could occur within their jurisdictions. Dissemination of this information will represent a paradigm shift in the way incident information is shared within California. Traditional "bottom up" collection of information during the energy crisis will have to effectively coexist with a simultaneous "top down" provision of useful intelligence.

The Governor's OES has a continuing role in disaster preparedness efforts, developing focused guidance and materials; giving local presentations; coordinating mutual aid discussions; assisting local agencies in their preparedness activities; and planning and participating in exercises. The City continues to train and exercise response functions throughout the organization, ensuring an ability to respond to emergencies.

D. Situational Analysis and Forecast

The Governor's OES Law Enforcement Branch has published an Information Bulletin on Law Enforcement Issues related to power outages, which has provided the following information.

Variables

- The Energy Commission estimates that 30% of electrical use during summer months is for air conditioning. An extreme heat wave during any of the summer months could stretch the system. If there are unplanned generation or transmission disruptions, outages could result. High winds have also brought down distribution and transmission poles and towers. This can bring local or wider scale outages.

- Another variable is the effect of the drought in the Pacific Northwest. This area of the United States received lower than usual rainfall during the winter, and officials in that area will be making decisions as to water storage vs. the use of that water for hydroelectric generation.

  California buys this hydroelectric power on a frequent basis, and a deficiency in this source means one less resource is available when needed.

- Conservation is still vital. California's residents and businesses have already made strides in this area, but every additional effort is important. The California Department of General Services has the lead on developing best practices for conservation in government buildings, as it is important to lead by example. Local governments should consider adopting similar practices. The more we conserve, the lower the probability of outages – and the lower our utility bills.

- Fire can always affect the electrical generation and transmission system. Some of the long distance transmission lines in California and in adjacent states are in areas of vegetation, and as such can be damaged during forest or brush fires. Use of fire retardants can affect the transmission lines capacity, and such considerations may come into play when developing fire suppression plans.

- Lines or generating plants are somewhat susceptible to sabotage, however it is important to note that there is absolutely no intelligence information that would suggest such activity is any more likely during this time.

- Lastly, the state reports that it is doing everything possible to bring additional generation capacity on line by mid summer. Factors that would delay this would seriously hamper our collective ability to provide continuous power to California.

Issues

In a meeting with representatives of California's Law Enforcement Mutual Aid Regions, the California State Sheriff's Association, the California Police Chief's Association and the California Highway Patrol, consensus was reached that to date no significant rise in criminal activity can be attributable to the rotating outages experienced so far.

There have been increased calls for service and activity during the outages. Communications centers are immediately flooded with inquiries about the outage and from calls reporting traffic signal failures. Call for service increases seem to be limited to traffic collisions and hazards, false alarm calls and medical emergencies.

Infrastructure Interdependencies

Even more critical and less apparent are the somewhat obscure interrelationships or interdependencies among the various "infrastructures". These include electric power, natural gas/oil, telecommunications, transportation, water/sewer systems, banking/finance, agriculture, emergency, and government services.

The other type of "infrastructures" that might be affected could include lifeline support of homebound medically dependent persons, homeless shelters and their support systems, mail delivery, bus service, school systems, recreational outlets and tourism among others.

Several types of interdependencies can occur: physical, cyber, logistical, and geographic. These interdependencies can lead to a "cascade effect," that translates into disruptions in areas or other infrastructures that may not even be closely related.

Electric power has become a central commodity for the provision of modern lifestyles, and its loss can stop other services from being delivered. One example is the continuous power source needed to run the ventilator for a medically dependent person. Less obvious ones might be the telephone system needed to summon help, or the transportation system needed to take the person elsewhere or the water system needed to maintain sanitary conditions. The failure of any one would put the medically dependent person at risk.

Scenarios

Based on the information available to date, if demand exceeds supply, rotating outages will occur. These outages should be similar in nature to those experienced so far, with the outage lasting for one to two hours per area (electrical service "block"). If the deficiency exists over a protracted period, the outages could move from area to area on a frequent basis until the demand drops or the supply increases. As such, a local law enforcement agency could see outages "hop" between areas in the community on a continuous basis for one or more hours each, over a period of many hours. At this point there is no reason to believe the outages will last any longer than the "standard" one to two hours per block, nor should they extend into nighttime hours. They could be more frequent, however. In addition, unplanned outages also occur due to equipment failures.

There are also two "worst case" scenarios worth consideration. They are highly unlikely, but contingency planning should take them into account. Both of these were of concern long before the current electrical energy emergency. The first is the possibility of a large-scale "cascading" power failure on a regional and/or multi-state basis. Again,

though this is highly unlikely, unchecked imbalance in the electrical grid can cause problems that take much longer to alleviate. Utilities must re-start generation and transmission from a "black start" condition which takes hours. The greater the percentage of the grid that goes out, the longer it takes to resume operations. Outages could last from a few hours to a day – longer in some areas. There is no reason to believe this is any more likely at this time than in the past or near-term future. However the experience of power loss from the tree fire in Oregon makes planning for such a contingency necessary.

Another "worst case" can occur with or without power outages – heat emergency. In Chicago during the summer of 1995 a protracted period of extreme heat in an urban area caused in excess of 500 deaths, mostly to the elderly. This was not related to a power failure. Several years later, Dallas suffered a similar problem. San Jose has a heat emergency plan in place that has been used for several summers. Senior centers remain open for longer hours, and offer a cool environment and cool drinking water throughout their operational period. OES distributes a flier on heat illness prevention at public locations throughout the community.

E. (CAISO) Alerts

This following is intended to provide information on the California Independent System Operator (CAISO) Alerts, Warnings, and Emergency Stages and to provide guidelines for the City to use in the event of a CAISO Stage 3 Emergency. The warnings are usually issued over Emergency Digital Information Service (EDIS). City organizations currently registered to receive these warnings include OES, Manager of Public Outreach, Police and Fire Dispatch, Environmental Services Department, General Services and Department of Transportation.

As a note, due to the nature of a CAISO Stage 3 Emergency, the City may not receive prior notification of the actual declaration and the possibility of resulting rolling blackouts. However, if advanced notification is given the notification procedures in this document may be helpful in giving prior notice to some agencies. This document is to serve as a guideline only. Depending on the amount of information available and the logistical limitations (timing, area(s) affected, and duration of outage) the notification procedures in this document may need to be modified. If there is an outage for which notification to the City is delayed, these procedures may not need to be used at all, especially if it is expected that the outage is short-term.

During a Stage 3 Emergency Declaration CAISO sends an alert to all electrical market participants, appropriate state regulatory, oversight, and response agencies. The information is then broadcast to the general public through a coordinated effort between the CAISO and utilities. As a result of this, many entities and the public may quickly become aware of the situation. PG&E notifies the Operational Area Office of Emergency Services, each affected City Office of Emergency Services, of the exact blocks that are experiencing the outages. Outside of normal business hours, City Police and Fire Dispatch centers are notified, along with County Communications.

Background of CAISO

When California recently changed its electric power distribution system, the State Legislature created the quasi-governmental California Independent System Operator (CAISO). One of the duties of the CAISO is to ensure that all demand for power is met, and also to provide for adequate reserves.

Electricity is made, distributed, and used in real time and cannot be stored, therefore supply is always being produced to meet demand. California is part of a grid interconnected within the Western US Region and participates in the voluntary Western Systems Coordinating Council (WSCC). The WSCC coordinates the activities and establishes the reserve requirements for the entire Western US Region.

Growth and the lack of power generation facilities have made the state's power system more vulnerable to supply shortages.

SUMMARY OF CAISO ALERTS, WARNINGS, and EMERGENCY STAGES

Alerts, Warnings, and Emergency Stages may be declared by the CAISO when a shortfall of electrical operating reserve or some other marginal operational condition is forecast to occur. The timing and severity of the forecasted shortfall is determines whether an Alert, Warning, or Emergency is declared. To clearly indicate severity of the power shortage Emergency is classified in three (3) stages, whereas there are no stages for Alerts or Warnings.

Alerts and Warnings are declared as a requirement for operation of the energy market mechanisms and are distributed among market participants only. Although, during the Warning phase courtesy notifications may be given to State OES, the Electrical Oversight Board, the Energy Commission, and the Public Utilities Commission.

An Emergency must be declared for more severe circumstances. When an Emergency is declared, that information is communicated to the general public by CAISO.

Summary descriptions of Alerts, Warnings, and Emergency Stages are shown in the following section.

Alert Declaration

An Alert declaration is made any time there is a forecasted shortfall of operating reserves of less than 7% or other marginal operational conditions, which are anticipated to occur in the next day. The Alert declaration is sent to market participants in an effort to stimulate electricity sources to provide more resources. The Alert declaration is also sent to CAISO Participating Transmission Owners (PTOs) and is forwarded by the PTOs to Utility Distribution Companies (UDCs) within their respective areas.

Warning Declaration

A Warning declaration is made as early as 2200 hours on the day before the forecasted shortfall (such as operating reserves less than 7%) is anticipated to occur. The Warning can also come sooner if available generating resources necessary to meet the forecasted shortfall is to be relieved by acquiring energy from a steam generating unit that requires 36 hours for a full start up. In that case, a Warning may be issued 36 hours in advance of the shortfall.

As in an Alert, the Warning declaration is sent to market participants in an effort to stimulate the market to provide more resources. For reliability purposes, the Warning declaration also enables the CAISO to seek additional resources, which may be available outside of the normal market structure. The Warning declaration is also sent to CAISO PTOs and is forwarded by their PTOs to UDCs within their respective areas.

At the Warning level, courtesy notifications may be given to State OES, the Electricity Oversight Board, the Energy Commission, and the Public Utilities Commission.

Emergency Stages

Stage 1 Emergency

A Stage 1 Emergency may be declared at any time it is clear that an operating reserve shortfall (such as less than 7%) is unavoidable, or is forecast to occur within the next two hours.

The severity of the Stage 1 Emergency is less than Stage 2 or 3 and indicates that the operating reserve is forecast to be below minimum criteria, but not so far below as to require interruption of service to consumers.

The Stage 1 Emergency declaration is sent to all market participants, to appropriate state regulatory, oversight, and response agencies, and is broadcast to the general public in a coordinated effort between the ISO and UDCs. Consumers are requested to voluntarily reduce their consumption of electric energy in order to avoid more severe conditions including involuntary curtailments.

Stage 2 Emergency

A Stage 2 Emergency may be declared at any time it is clear that an operating reserve shortfall of less than 5% is unavoidable, or is forecast to occur within the next two hours. The severity of a the Stage 2 Emergency is less than Stage 3 and indicates that the operating reserve is forecast to be below minimum criteria and at a level where significant intervention is required by the CAISO. At this level, interruption of service to selected consumers is required in order to avoid more severe conditions. Selected consumers are electricity customers who have agreed to be interrupted if a Stage 2 Emergency is declared. These customers receive a reduced rate for their electricity service as compensation for their willingness to be curtailed. The County of Ventura participates in the Interruptible Rate Program.

The Stage 2 Emergency declaration is sent to all market participants, to appropriate state regulatory, oversight, and response agencies, and is broadcast to the general public in a coordinated effort between the CAISO and UDCs. Consumers are requested to voluntarily reduce their consumption of electric energy in order to avoid more severe conditions including involuntary curtailments.

Stage 3 Emergency

A Stage 3 Emergency may be declared at any time it is clear that an operating reserve shortfall of less than 1½% is unavoidable, or is forecast to occur within the next two hours. A Stage 3 Emergency is the most severe category and indicates that, without significant CAISO intervention, the electric system is in danger of imminent collapse. Involuntary curtailment of service to consumers (such as “rolling blackouts”) may occur during a Stage 3 Emergency.

The Stage 3 Emergency declaration is sent to all market participants, to appropriate state regulatory, oversight, and response agencies, and is broadcast to the general public in a coordinated effort between the CAISO and UDCs. Consumers are advised that involuntary interruptions of service have begun and will be continued until the emergency has passed. Consumers are requested to reduce their consumption of electric energy wherever possible to avoid more severe involuntary curtailments.

F. EOC Activation

City of San Jose will activate the Emergency Operations Center at the request of a department, to facilitate resource coordination; at the request of the City Manager; or in the event of the development of an emergency condition that exceeds the normal response resources of the City. Activation and staffing levels will be at the direction of the City Manager, based on the analysis of the situation. EOC activation will follow the normal guidelines and procedures.

G. Pre-Emergency Period

The five phases of readiness conditions that apply to City emergency operations prior to activation are preparedness, increased readiness, pre-impact, immediate impact, and sustained emergency. These phases are described progressively. The Director of Emergency Services (City Manager) will activate these phases.

The Pre-Emergency Period is divided into two phases as follows:

Normal Preparedness Phase

During this phase, emphasis will be placed on preparing supporting plans, Standard Operating Procedures (SOPs) and checklists dealing with the use of energy resources during an emergency. Such plans and procedures will provide for coordination and communication channels with governmental agencies and elements of the private sector that normally provide energy services. The normal preparedness phase corresponds to the Energy Commission's Readiness response.

Increased Readiness Phase

This phase could begin due to various conditions such as severe electric power shortages. Increased readiness actions will include reviewing and updating plans, SOPs, and resource information, and assuring that key and essential personnel, facilities, and equipment are operationally ready and have sufficient fuel available and in reserve for emergency use. Activation of the Emergency Operations Center at the appropriate level is also a consideration.

During the increased readiness phase, the Energy Commission begins its Verification Phases during which the magnitude and duration of an energy shortage are estimated and various options for a statewide response are studied.

This phase will be initiated when the Director of Emergency Services, in consultation with the state and Operational Area, determines that, based upon intelligence; a greater likelihood of threat may exist. Examples of these threats may include:

- Analysis of lessons learned from statewide exercises & drills (hospital and utilities).
- Potential civil disturbance.
- "Runs" on banks, markets, gas stations etc.
- Events in other cities or other areas outside the County, which may have significant media or economic impacts on the City.

During the increased readiness phase the following steps are required:

- Confirm 24-hour phone numbers and points of contact for EOC staff.
- Reevaluate initial staffing patterns and determine staff needs and availability.
- Test, repair, and purchase equipment as necessary.
- Complete all activities pending from the previous phase.
- Identify potential needs from analysis of situation reports.
- Develop ad hoc contingency plans for perceived needs.

- Share relevant alerts and warnings and intelligence reports with local governments and the Operational Area and in accordance with OES media strategy.

Emergency Period

The Emergency Period is divided into three phases as follows:

Pre-Impact Phase

Most actions to be accomplished during this phase are precautionary in nature and centered around taking appropriate countermeasures to protect people should the jurisdiction be affected by a major earthquake, other types of energy shortages, or other disaster.

During the pre-impact phase, the Energy Commission continues its Verification phase and makes public its estimates of the magnitude and duration of the energy shortage. If appropriate, the Commission also explains what actions it will take and what recommendations it intends to make to the Governor. During this time, communication between the Operational Area leadership and potentially effected jurisdictions/agencies/organizations within the county are essential. Information exchange with State Office of Emergency Services (OES) Coastal Region is also vital to maintaining a rapid response posture.

Immediate Impact Phase

Actions taken during this phase will be concentrated on the well being of people affected by an event. Examples of such events might be a major earthquake causing supply disruption, or ceasing of shipments from a major overseas supplier.

A causative event such as a major earthquake that creates energy disruptions will result in a more complex response since two "disasters" will have to be managed. The Standardized Emergency Management System (SEMS) will accommodate the response to both, as modifications to the system can be made quickly.

The Director of Emergency Services, in consultation with the State Operational Area, will determine, based upon information from such sources as State OES, PG&E, PUC, or other credible sources, if there have been occurrences in other parts of the state due to power outages, or attributed to it, that pose a significant threat to the City.

Possible triggering events might include:

- Major power outages, for any reason.
- Nuclear power plant accidents for any reason.
- Terrorist acts or acts of unknown origin or suspicious cause that appear to be terrorism (anywhere).
- Major local gatherings or events that have or may lead to civil disturbances.
- Major hazardous materials releases.
- Major wildland fires with transmission line involvement.

During the alert/warning phase the following steps are required:

- Bring key staff to standby, cancel travel and vacations if necessary, to ensure proper staffing levels are available.
- Evaluate potential staffing patterns; advise the EOC Director that backup staff may be needed.

- Communicate with local neighboring governments regarding status.
- Complete all activities pending from previous phase.
- Implement OES media strategy.

Priority activities will include providing appropriate City services to PG&E as they restore key and essential energy services and assess any damage to or dislocation of the energy distribution networks.

During the immediate impact phase, the Energy Commission initiates its Pre-Emergency phase to an energy shortage. Voluntary programs such as ridesharing and flexible work schedules are begun with the commission acting as a central clearinghouse for all information regarding the effectiveness of programs.

Sustained Emergency Phase

As protective actions continue, attention can be given to sustaining populations in the effected areas. Energy must be supplied to support the delivery of essential equipment, services, and other resources. If an energy shortage worsens, the Energy Commission may begin its Emergency phase, and the Governor may, after proclaiming a State of Emergency, implement mandatory energy conservation programs

Post-Emergency Period (Recovery)

Priorities during this period will be focused on continuing to provide key and essential energy services and assisting in recovery operations. Various assistance programs may be available to help mitigate economic hardships to low-income households in the event of a serious energy supply disruption. These programs will be administered by the California Department of Economic Opportunity (DEO), with the assistance of an Inter-Agency Task Force representing various agencies involved in economic assistance programs and the Energy Commission.

II. PUBLIC INFORMATION

The amount and type of media interest and coverage of the energy crisis will undoubtedly influence public information during any power outages. In anticipation of an expanded need for public information and public information officers (PIOs), City PIOs have a disaster SOP, and staffed trained to implement that SOP.

Public information in the City will follow protocols for dealing with the media. PIO activities will be coordinated through the Assistant City Manager in the EOC. All contacts that are handled by the EOC staff will be noted on the PIO duty log.

III. ADVANCE WARNING INFORMATION COORDINATION

The state of California and the PUC are working with PG&E to develop early warning systems that will allow for intelligence to be funneled into California's response system. State OES will disseminate this information from the SOC to the Operational Areas. The Operational Areas (OAs) will in turn disseminate the information to the local government EOCs.

City Staff Actions during Power Disruptions

The General Services Department and Environmental Services Department staff members have been evaluating the City's preparedness for power disruption. Emergency power supplies have been provided for critical services, and tested regularly. Contingency plans have been made of obtaining additional supplies of fuel to run generators. An analysis has been made of services that would have to be curtailed due to a power outage. A plan to prevent conditions that would endanger life and health has been made, and appropriate steps implemented. Working in concert these departments will:

- Monitor the progress of the energy emergency and obtain information from the California Energy Commission via established communication lines.
- Prepare an analysis of the probable effects.
- Maintain contact and liaison with energy providers.
- Assist in procuring and distributing essential energy resources to support City emergency operations by applying to the Petroleum Fuels Set-Aside Program if appropriate.
- Coordinate with energy suppliers to support emergency restoration of disrupted City services.
- Provide accurate information on City services impacts to release to the public through the Public Information Officer.

IV. OES MISSION TASKING AUTHORITIES & STATE AGENCY ROLES

Response to resource requests from local government including the coordination of mutual aid and the tasking of state agencies will be conducted under the authority of the Emergency Services Act, the State Emergency Plan, adopted statewide Mutual Aid Plans, and their attached SOPs.

V. SOC AND REOC OPERATIONS

The State Operation Center (SOC) as defined in the Standardized Emergency Management System refers to the state operated Emergency Operations Center that provides resource coordination statewide.

SEMS calls for the simultaneous activation of the SOC and Regional Emergency Operations Centers (REOC) following the occurrence or anticipation of an imminent threat or disastrous event, or the activation of an Operational Area EOC.

One key role of the SOC is to identify and designate scarce or potentially scarce resources and ensure for the proper prioritization and effective use of such resources. The current energy crisis poses a potentially significant dilemma--statewide impacts may result in many resources becoming scarce, with little or no timely assistance from the federal government.

In order to identify what resources may in fact become scarce, OES, through the Governor's Emergency Preparedness Task Force, has embarked on an aggressive effort to both aid local government planning and help the state to identify potential resource shortfalls. As these become evident, OES state operations will coordinate this information with OES regions that will assist local government to adjust their plans and preparations prior to EOC activations.

VI. EOC OPERATIONS

Within SEMS, the REOCs are the primary response coordination points for state and federal assistance to local government during a disaster. OES' three regional headquarters—Southern (Los Alamitos), Coastal (Oakland), and Inland (Sacramento)—will be fully staffed during the designated activation period to provide this function for their respective operational areas (OAs).

Federal Assistance in the Region

If federal assistance is required, a Request for Federal Assistance (RFA) is generated by the REOC, submitted to the SOC Director for approval, and transmitted to FEMA. The California-Federal Emergency Operations Center Guidelines outline the expectation for

FEMA and Emergency Services Function representation at the SOC and REOCs. In general, federal agencies will assist California emergency responders when needed and will provide staff representation as requested.

Agencies in the EOC

Agency representatives from several local, special districts, state and federal government agencies are expected to participate in response coordination in the EOC. The agency representatives should be able to speak for his/her agency within established limits and facilitate requests to his/her agency. Some of the key agencies that may become involved with a power outage related emergency response include:

- Utilities including PG&E
- Santa Clara Valley Water District
- Telecommunications providers
- American Red Cross and Salvation Army
- Radio Amateur Civil Emergency Services (RACES)

Additional agencies (depending on the nature of the response) may be asked to assist.

A. Operations Section

If the pre-event expectations hold true most of the significant problems due to power outages will be related to the large numbers of 'voluntarily displaced' persons located at large venues and buildings around the City. The traditional law mutual aid system will respond to any law enforcement immediate needs.

EOC staffing will follow the Emergency Operations Plan.

Areas of Focus for Power Outages

It will be the responsibility of the Planning/Intelligence section to locate the required information and make it available to the response community.

Utilities and Infrastructure

Includes energy systems (electric, gas), water delivery, wastewater treatment, dams, and telecommunications (both emergency telecom and general user).

1. Information needed: system disruptions and failures—location, customers Impacted, expected time of resumption, and cause(s).

2. Sources:
   a. State and local: via Resource Information Management System (RIMS) reports, OES field representatives, conference calls (between EOC and Operational Area EOC and/or REOC for local utility and special district information), email and Internet.

- Independent System Operator (ISO)
- State agencies (DWR, SWRCB, DHS, GSA, CEC, CPUC, etc.)
- California Emergency Utilities Association (CEUA)
- Utilities representatives in EOC
- Adjacent Operational Areas
- News Reports
- Utilities Branch
- Field Units

b. Federal level: via RIMS reports, conference calls (between FEMA, EOC and REOC), email and Internet.
- FEMA
- Federal Energy Regulatory Commission
- Bureau of Reclamation
- Army Corps of Engineers
- Nuclear Regulatory Commission/Nuclear Power Plants
- News Reports
- Field Units

<u>Transportation</u>

1. Information needed: disruptions to air, rail, ship, and ground transportation.

2. Sources:
   a. State and local: via RIMS reports, OES field representatives, conference calls (between EOC and Operational Area and/or REOC), email and Internet.
      - CalTrans for state highways
      - CHP for state highways and local thoroughfares
      - Adjacent Operational areas
      - News reports
      - Field Units

   b. Federal level: via RIMS reports, conference calls (between FEMA, EOC and REOC), email and Internet.
      - Coast Guard
      - Federal Aviation Administration
      - National Transportation Safety Board
      - Department of Transportation
      - News reports
      - Field Units

<u>Medical/Health</u>

1. Information needed: equipment failures, disruptions in medical supplies, hospital facility availability/problems, medical evacuation needs.

2.Sources:

a. State and local: via RIMS reports, OES field representatives, agency liaisons, conference calls (between EOC and Operational Area and/or REOC), email, and Internet.

- Emergency Medical Services Agency (Including Regional Disaster Medical Health Coordinators)
- County Public Health
- Office of Statewide Health Planning and Development
- Adjacent Operational Areas
- News reports
- Field Units

b. Federal: via RIMS reports, conference calls (between FEMA, EOC and REOC), email and Internet.

- FEMA
- Food and Drug Administration
- News reports
- Field Units

Hazardous Materials

1. Information needed: releases, exposures, casualties, evacuations, damage and supply disruptions.

2. Sources:

a. State and local: via RIMS reports, OES field representatives, agency liaisons, conference calls (between EOC and Operational Area and/or REOC), email and Internet.

- State OES (Warning Center)
- Cal/EPA
- Cal/OSHA
- Department of Health Services
- Public Utilities Commission
- Fire Department HIT
- Adjacent Operational Areas
- News reports
- Field Units

Public Events/Occurrences

1. Information needed: potential problems at any anticipated events, including civil unrest, law enforcement and fire mutual aid shortfalls.

2. Sources:

    a. State and local: via RIMS reports, from Operations Section/Law Coordinators, conference calls (between EOC and Operational Area and/or REOCs), email and Internet.
        - Regional Law Enforcement Mutual Aid Coordinators
        - Adjacent Operational areas
        - News reports
        - Permits Issued
        - Field Units

Social Systems

1. Information needed: problems with schools, banking, social services, general commerce.

2. Sources:

    a. State and local: via RIMS reports, OES field representatives, agency liaisons, conference calls (between EOC and Operational Area and/or REOC), email and Internet.

        - Adjacent Operational areas
        - News reports
        - Private sector
        - Field Units

Information Flow

SEMS will be followed and will dictate how information flows from the field to local government, to the operational area, to the REOC and to the SOC. Any demands from the federal or state level, except where prescribed by standard operating procedures, should flow in reverse, i.e., through the SOC down. Generally, information will be reported on RIMS. It is recognized that the energy crisis will present some unusual demands for information, both in terms of quality and timeliness. In some cases, information will be needed from entities that are not typically part of the response and recovery process and are not RIMS users. This being the case, the State's Advance Planning Unit Action Plan should determine reporting responsibilities, develop guidelines for obtaining or providing the information needed (as described above), define reporting methodologies (e.g.,

develop specialized reports on RIMS, email, fax, or verbal reports) for those identified sources not on RIMS, and identify standard report times for the response and recovery phases.

Use of Conference Calls

Conference calls can provide a very useful and timely method of communication when used properly. They are especially useful to augment existing reporting mechanisms (e.g., RIMS reports). Regularly scheduled conference calls can avoid an uncontrolled stream of information and requests from a variety of sources that can be disruptive to EOC activities. Conference calls for the energy crisis should be set up at regular intervals among the following:

- FEMA (and key federal agencies), the SOC (and key state agencies), and REOCs.
- REOCs and their respective operational areas.
- Operational Areas and their respective cities and Special Districts.

Advance Planning

The establishment of an Advance Planning Unit will be an essential and early part of the EOC, OPAREA, REOC and SOC organization.

For Response—

- Identify key areas where response activity is likely to be needed in the future as events unfold; help operations pre-identify resources and actions accordingly.

For Response to Recovery—

- Prior to deactivation, identify key areas to be coordinated with Disaster Assistance Division (DAD) (and possibly a Disaster Field Officer/Federal Coordinating Officer (DFO/FCO) as events cease and recovery begins.

VII. CALIFORNIA-FEDERAL OPERATIONS COORDINATION

If federal assistance is required, the SOC will contact FEMA to provide needed federal resources to support emergency operations. Assistance includes tasking federal Emergency Support Functions (ESFs), through FEMA, to provide staff at the REOC and/or SOC SEMS levels, and resources to support local government response. In multi-region events, ESF representation and assistance may be needed at both SEMS levels. When multi-region events occur, ESF coordination will be centralized at the SOC level with staff representation at the individual REOCs as appropriate.

The California-Federal Emergency Operations Center Guidelines and OES-FEMA Memorandum of Understanding are available for reference.

VIII. RESPONSE TO RECOVERY

Due to the possibility of widespread activity as a result of the statewide energy crisis, the potential is great to have simultaneous response activities underway while recovery activities are going on in other areas. To ensure a smooth transition, the early communication with the State Disaster Assistance Division (DAD) by the EOC Planning/Intelligence Section is required. Initially the County Chief Administrative Office representatives will act as part of advance planning to ensure early identification of recovery issues and informational needs. If conditions warrant, CAO staff will form a separate Recovery Planning Branch within the Planning/Intelligence Section and the Legal Section to act as the focal point of recovery action planning and the development of transition plans.

The CAO and Board of Supervisor representatives will provide key liaison roles with regional, state and federal counterparts. Meetings to address recovery issues can be convened at the EOC where up to date information will be available to representatives.

CALIFORNIA-FEDERAL EMERGENCY OPERATIONS CENTER GUIDELINES

Integrating Federal Disaster Response Assistance with California's Standardized Emergency Management System

April 1998

Pete Wilson
Governor

Richard Andrews
Director
Governor's Office of Emergency Services

CALIFORNIA-FEDERAL EMERGENCY OPERATIONS CENTER GUIDELINES

I. PURPOSE

This document describes the process for federal agency integration into California's Standardized Emergency Management System (SEMS) at the regional and state levels. Specifically, it implements a portion of the Memorandum of Understanding (MOU) signed by the Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency (FEMA). The MOU is an attachment to this document. These guidelines are consistent with the Federal Response Plan, State of California's Emergency Plan and Emergency Services Act, and SEMS Regulations, Guidelines, and Approved Course of Instruction.

II. EMERGENCY RESPONSE IN CALIFORNIA

The basic premise of SEMS is that emergencies are handled at the local level by local authorities until their ability to respond is overwhelmed. Emergency management begins at the incident location, known as the ***field*** level of response. As the size of the emergency increases or multiple emergencies occur that are beyond the capabilities of local responders, information gathering and requests for resources are transmitted from the field level through the ***local***, ***Operational Area*** (county), ***regional,*** and ***state*** levels of SEMS. Once state level resources are insufficient to deal with the emergency, OES will access the federal government through FEMA for assistance. SEMS is based on the basic management principles of the Incident Command System (ICS) and is designed to expand and contract according to the needs of the incident.

Coordination for response and support to an incident above the field level occurs at Emergency Operations Centers (EOCs). Under SEMS, EOCs can be activated at appropriate governmental levels to provide support and coordination as the needs of the incident response expand. The state of California is responsible for coordinating the regional and state levels of response and activates one or more of three Regional Emergency Operations Centers (REOCs), as the situation requires. By policy, the State Operations Center (SOC) activates simultaneously whenever one REOC or more is activated. The SOC coordinates all statewide response activities in support of the regions and each REOC coordinates all response activities within the individual region.

Once federal assistance is required, the SOC will contact FEMA to provide needed federal resources to support emergency operations. Assistance includes tasking federal Emergency Support Functions (ESFs), through FEMA, to provide staff at the REOC and/or SOC SEMS levels, and resources to support local government response. In multi-region events, ESF representation and assistance may be needed at both SEMS levels. When multi-region events occur, ESF

coordination will be centralized at the SOC level with staff representation at the individual REOCs as appropriate.

III. ANNEX

Under SEMS, the SOC is the top level of California's emergency response support structure. It facilitates the prioritizing of resource requests when more than one REOC is in need of resources, and acts as a conduit for formal requests of federal aid when the need arises. The SOC will also approve or obtain approval of the state's share of the cost of response resources utilized. Additionally, the SOC coordinates the state declaration process, consolidates information for the OES Director, and provides support for direct contact with the Governor and the Legislature during times of disaster.

Once federal resources are determined to be necessary, the SOC will request that FEMA provide a Federal Coordinating Officer (FCO) or other federal representative with the authority to approve Requests for Federal Assistance (RFA). The FCO or other representative will respond to the SOC. If the FCO relocates to the Disaster Field Office (DFO), the FCO will ensure that a federal representative with the authority to approve federal assistance remains at the SOC. FEMA and the ESFs will provide assistance in accordance with the Federal Response Plan, the FEMA/California Memorandum of Understanding, and a Presidential Declaration of an emergency or major disaster.

The REOC functions as the central point of coordination for state and federal assistance within the region. The OES Regional Administrator or REOC Director will coordinate with the SOC and FEMA Region IX to request, through the SOC, ESF personnel in the REOC and requests for assistance. Once ESF representation is established at the REOC, the REOC will then act as a joint state-federal point of coordination for all response activities within the affected region. FEMA and OES will conduct joint action planning meetings in accordance with the REOC's established operational periods (in accordance with SEMS). Federal ESF staff in the REOC(s) will operate as Federal Agency Representatives.

The REOC Director has overall responsibility for planning and coordinating all state response activities and coordinating with the ESFs regarding all federal response activities occurring within the region, including federal agencies operating under their own authorities. Once tasked by FEMA, ESF representatives in the REOC have responsibility for assisting the REOC Director by identifying and procuring federal assets to supplement state response activities. The ESFs will also ensure that coordination occurs between the REOC and federal agencies operating under their individual authorities.

The determination of whether to use state or federal resources will be made by consultation between the REOC, SOC, FCO, and ESFs. Once the decision is made to activate federal resources, the first major areas for consideration and joint decision-making will be, but are not limited to, the following:

A. Identification of the location, size, and composition of critical support infrastructure facilities/activities to ensure the coordinated flow of resources into the affected area. Areas for consideration are as follows:

- Disaster Support Areas (DSA) to support response activities.
- Point of Arrivals (POA) for incoming state and federal personnel, equipment, material, and supplies.
- Assembly Points (AP) for state and federal personnel, equipment, materials, and supplies.
- Mobilization Centers (MC) for state and federal personnel, equipment, materials, and supplies.

B. Activation of the joint state-federal Transportation Branch and federal Movement Control Cell (MCC) (within ESF #1) for the identification, prioritization, and mobilization of state and federal transportation resources required to transport emergency response personnel and disaster relief supplies and equipment.

C. Establishment of communications with the Operational Areas within the affected area and any support installations established by OES/FEMA.

D. Joint deployment of OES and FEMA representatives into the affected area.

E. Prioritization of work for readily available state and federal assets (those that can be on-scene within 24 hours).

F. Evaluate the need for federal Initial Response Resources (IRR). These resources are available to address the immediate response needs of victims when state and local resources are or will be overwhelmed by a disaster. Using the federal Annex for the Initial Response Resources Program, conduct the following activities necessary to determine which IRR resources are needed. Initiate all requests for federal IRR resources and commodities with reference to the IRR's Time-Phased Force Deployment List (TPFDL).

- Assessment of the situation through the designated state and federal disaster intelligence networks and rapid identification and prioritization of the critical lifesaving requirements. Identify requirements for the Medical Support Unit (MSU), Disaster Medical Assistance Teams (DMAT), Urban Search and Rescue (USAR) Teams, and USAR Incident Support Teams (IST).
- Identification of requirements for additional joint situation assessment and incident management teams. Identify requirements for the Field Assessment Team (FAsT) and Incident Management Teams (IMTs).
- Identification and prioritization of requirements for IRR Commodities.

G. Identification, prioritization and mobilization of anticipated and requested response actions.

H. The establishment of a Joint Information Center (JIC).

I. Monitor the situation during the operation to determine when the bulk of the activities are recovery oriented. When the response phase of the operation is near completion, the joint staff will develop and implement a plan to transition the majority of activities to the DFO. The REOC Director, in consultation with OES' Disaster Assistance Division (DAD) management and FEMA officials, will manage this ongoing transition in an orderly and coordinated fashion.

J. Coordination of all federal response to the event, including federal agencies responding under their own authorities, with the REOC. All information gathered by federal and state personnel operating in the affected area will be coordinated with the appropriate joint staff section in the REOC in order to avoid inconsistent or out of date information from being released.

IV. ROLES AND RESPONSIBILITIES

In response to disasters in California, OES is responsible for two levels of SEMS, the regional and state levels. In accordance with SEMS procedures, it is the intent of the Director of OES that coordination of the majority of state and federal level response resources occur at the appropriate REOC. Upon notification to OES of a major emergency or disaster, coordination among the appropriate REOC(s) and OES personnel will begin. The appropriate REOC(s) will activate as necessary. Upon a REOC(s) activation, the SOC will simultaneously activate per OES policy.

A. The REOC's primary responsibilities are:

1. Coordinate information gathering and requests for assistance from Operational Areas.
2. Mission task appropriate state resources to support local operations.
3. In consultation with the SOC, ESFs, FEMA, and the FCO, determine what level of state and federal assistance is needed to respond to a disaster within the region, draft Requests for Federal Assistance (RFA), and forward them to the SOC for approval and action.
4. Coordinate state and federal response activities within the region.
5. Coordinate with the DFO, SOC, and other applicable parties through the ongoing transition from response activities to recovery actions.
6. Provide information to assist FEMA and other ESF federal representatives in completing required federal reports.

B. The SOC's primary responsibilities are:

1. Immediately following an event, coordinate initial actions with appropriate REOC(s) and OES personnel. Activate the SOC upon activation of any REOC(s).
2. Coordinate the declaration process.
3. Coordinate requests for and placement of FEMA/ESF staff in the REOC(s) and/or the SOC per the OES/FEMA MOU. Requests for FEMA/ESF personnel will be made by the SOC to FEMA.
4. Process, approve, and transmit requests for federal assistance received from the REOC(s) to the FCO. Coordinate activities with DAD.
5. Oversee any aspect of the response effort that is beyond the scope or capability of the REOC(s).
6. Set priorities, coordinate response activities, and provide support in multi-region activations.
7. Coordinate with the REOC, DFO, and other applicable parties through the ongoing transition from response activities to recovery actions.

C. The role of FEMA and ESF agencies:

1. Upon request, deploy a FEMA representative and necessary components of the Emergency Response Team-Advance Element (ERT-A) to the SOC and/or REOC in accordance with the MOU. Deploy the FCO, or other federal representative with the authority to commit federal resources, to the SOC as soon as possible. The FCO may initially, upon OES request, temporarily deploy to a REOC if the result is faster federal assistance.
2. Assist REOC and/or SOC staff in determining immediate needs and objectives and suggest the best use of federal capabilities to meet requests for assistance within the region. Assist, as necessary, in completing the RFA.
3. Assist REOC and/or SOC staff to integrate and coordinate federal response activities within the affected region(s).
4. Coordinate with the REOC staff, DFO (with the OES DAD liaison), SOC, and other applicable parties through the ongoing transition from response activities to recovery actions.
5. Provide information to assist REOC and/or SOC staff in completing required OES reports. Assure the coordination and sharing of information.

V. REQUESTS FOR FEDERAL ASSISTANCE (RFA)

When federal assistance is necessary, the REOC (in consultation with the SOC, FEMA, ESFs, and others as appropriate) will develop the RFA and transmit it to the SOC for state and federal approval. Resource requests will be coordinated within specified joint staff sections in the REOC. The standard will be to fill the request with the agency, state or federal, that can best provide the assistance in a

timely manner consistent with the needs of the requesting agency. However, if it is determined by the responsible joint staff section that both a state and federal agency can equally provide the support requested, then the state agency will be mission tasked by the REOC and no RFA will be generated.

VI. STAFF SERVICE/SUPPORT

OES will provide workspace, office supplies, telephones, and fax machines for federal representatives in the REOC or SOC. Federal personnel will be responsible for providing their own computer equipment and transportation. OES program support personnel will assist federal representatives in linking their computers to the Response Information Management System (RIMS). However, any purchase of hardware and software to resolve compatibility issues between state and federal computer equipment will be the responsibility of FEMA and/or other federal agencies.

VII. RESPONSE TO RECOVERY

Financial reimbursement for costs incurred during presidential declared disasters will be coordinated at the earliest possible moment. Cost sharing agreements between state and federal agencies should be clarified prior to the onset of response activities. As the focus shifts from field response to recovery activities, the State Coordinating Officer and FCO will work together to transition activities to the DFO for ongoing recovery coordination.

Attachment 2

FEMA/OES
MEMORANDUM OF UNDERSTANDING
(AS FINALIZED—JANUARY 1995)

Memorandum of Understanding (MOU) entered into this 18th day of October 1994, by and between the Federal Emergency Management Agency (FEMA), and the state of California.

I. PURPOSE

The purpose of this MOU is to delineate the procedures for the working relationship between the Federal Emergency Management Agency (FEMA) and the state

of California when a disaster or emergency is predicted or has occurred. The procedures specify the support that FEMA will provide the state and the support that the state will provide to FEMA when the specific circumstances noted in paragraph II below, are present. The FEMA support to be provided will be in accordance with the Federal Response Plan and procedures agreed to between FEMA Region IX on behalf of FEMA and the state.

II. SCOPE

Each provision of the MOU will be implemented after coordination between FEMA Region IX and the state of California when a disaster or emergency is predicted or has occurred. The MOU becomes effective upon signature of the OES Director, FEMA Director and FEMA Region IX Director.

III. RESPONSIBILITIES

A. FEMA agrees to:

1. Implement the Federal Response Plan as appropriate.

2. Maintain a 24-hour alerting and activation capability and provide the state with alerting procedures, telephone and pager numbers.

3. Establish 24-hour communications and implement reporting with the state during the monitoring phase of a potential disaster; or emergency or as soon as possible after the disaster or emergency has occurred.

4. Deploy a FEMA Representative to the State Emergency Operations Center (SOC) and/or the Regional Emergency Operations Center (REOC) at the request of or with the concurrence of the State Emergency Director. This is to provide direct coordination between the State Director and Regional Director, as well as coordination between the REOC (State) and the Regional Operations Center (ROC-Federal).

5. Implement the Federal Response Plan for predicted disaster or emergency or one that has occurred. FEMA Region IX shall regularly consult with the state and shall develop a state supplement to Federal Response Plan as necessary to meet specific requirements.

6. Deploy a management, operations and information planning section of the Emergency Response Team - Advance Element (ERT-A), with the exception of the FEMA Human Services and Infrastructure elements, to the appropriate REOC (or other operational location(s) specified by the state), with state concurrence, prior to or promptly after an actual disaster or emergency. The ERT-A will provide coordination for the Federal Response effort and technical assistance to the state.

7. Dispatch emergency materials, supplies, and other assistance known as an Initial Response Package (IRP) when a disaster or emergency is predicted or has occurred. The Regional Director and the Regional Administrator (REOC) will consult with their counterpart or representative to determine elements of the package to be developed.

8. Establish, in coordination with the state, a mobilization area to receive disaster supplies, either at a location that has been previously identified or at any other mutually agreeable location. FEMA will manage the centers and no element of the response package(s) will be deployed from the centers to local governments without consultation and approval from the state.

9. Upon request by the state, provide personnel to conduct a joint federal, state and local situation assessment promptly after a disaster or emergency has occurred.

10. Upon request by the state, advise and assist in the interpretation of the provisions of the Robert T. Stafford Act, and in the preparation of the Governor's request for a Presidential declaration of a major disaster or emergency.

11. In coordination with the state, determine appropriate location and time lines for establishment of the Disaster Field Office (DFO) and Disaster Application Center (DAC).

12. As requested by the State, provide technical assistance to the state in Donations Management.

B. The state agrees to:

1. Maintain 24-hour alert capability, including a point-of-contact or duty officer available at all times and provide FEMA Region IX with procedures for contacting state personnel.

2. Establish communications with FEMA Region IX during the monitoring phase of a potential disaster or emergency or immediately after a disaster or emergency occurs.

3. Implement the State's Emergency Operations Plan.

4. Provide workspace and equipment for the FEMA representative (s) deployed to the SOC and / or the REOC (s).

5. Deploy an OES Representative to the FEMA Region IX Operations Center (ROC) at the request of the FEMA Regional Operations

Director. This is to provide direct coordination between the REOC and the ROC.

6. Develop state operations procedures to work with the ERT-A

7. Participate in the joint federal/state/local situation assessment.

8. In coordination with FEMA, determine appropriate location and time lines for establishment of the Disaster Field Office (DFO) and Disaster Application Centers (DAC). Provide appropriate state personnel to co-staff the DFO and DACs with FEMA.

IV. FINANCIAL AGREEMENTS

All costs for assistance shall be in accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended, and consistent with the Presidential declaration and other specific terms in the federal/state agreement.

V. AMENDMENTS

This MOU may be modified or amended only with the written agreement of the signatories. All amendments shall be attached to the MOU. Either party upon 30 days written notice may terminate the MOU.

Signed by S. Mattingly — October 18,1994
Director — Date
Federal Emergency Management Agency
Region IX

Signed by James L. Witt — December 13, 1994
Director — Date
Federal Emergency Management Agency

Signed by Richard Andrews — January 23, 1995
Director — Date
Governor's Office of Emergency Services
State of California

Attachment 3

Power Outage Standard Operating Procedure

Purpose: to address specific actions of City departments during a power outage

It is likely that the City of San Jose will experience rolling blackouts, and possible that power outages from other causes may occur. All City departments have an obligation for the safety of their employees, and to the continuous provision of essential services to the community. The establishment of standard operating procedures will enhance the success of these efforts. At present the State intends to provide advance notice of outages over the Electronic Digital Information System (EDIS) that can be received at a personal computer. Advanced notification will also be carried on CLETS for Police Dispatch.

1. Fire Department
   a. Fire Dispatch will
      1) Notify all Fire units in the outage area of the anticipated rolling blackout and its timing
      2) Manage initial response to fire alarms in the outage area

   b. Fire Operations will
      1) Respond to people trapped in elevators based on the following priority
         a) Reports of medical emergency in the elevator
         b) Hospitals
         c) Senior citizen residences
         d) Other high rise buildings
      2) Provide emergency medical response to those medically dependent on electricity whose back-up power supply has failed
         a) Provide immediate life sustainment
         b) Transport to the hospital as directed by County Communications
      3) Each station will review all critical equipment to ensure that it will operate on alternative power
         a) Flashlights and regularly rotated batteries in work and sleeping areas (dorms, kitchen, break area, rest rooms, equipment bays)
         b) Fire detection/protection equipment not dependent on PG&E power
         c) Telephone
         d) Alternate charging capability for radios
      4) Each station will ensure that it has a plan for safe exiting during a power outage, in the event exiting is required
      5) Each station will check on fuel availability levels at fire station facilities, and request refueling from GS mobile reserve, if needed.

   c. Fire Administration will
      1) Determine which fire stations are in blocks subject to rolling blackouts
      2) Prepare each station for safe operation during a blackout including:

a) Fire Department Administration Point of Contact to receive rolling blackout pre-event announcements via EDIS during business hours, and ensure coordination with OES to get on the EDIS list
b) Fire Dispatch orders to notify stations of impending rolling blackouts
c) Standing orders to remove equipment from the bays when their block is announced for a rolling blackout

3) Fire PIO will support Field Operations, and coordinate with City PIO's as needed
4) Provide pre-event public education on fire safety during power outages using materials available from NFPA, PG&E or San Jose OES

2. Police Department

a. Police Dispatch will
1) Notify all beat patrol personnel in the outage area of the impending rolling blackout
2) Notify all non-Block 50 police facilities of an impending blackout
3) Manage burglar alarms in the outage area

b. Police Field Operations will
1) Implement the "Response to traffic signals in times of power outage or blackout" policy issued February 8, 2001.
2). Heighten staffing for responding to calls regarding burglary or looting in outage areas
3) Police PIO's will support Field Operations, and coordinate with PIO's as needed

c. Police Administration will
1) Determine which police facilities are outside of Block 50 (stables, community policing centers, facilities used by Police personnel outside of the Civic Center complex, for example) in advance
2) Determine a Police Department Administration Point of Contact to receive rolling blackout pre-event announcements via EDIS during business hours, and ensure coordination with OES to get on the EDIS list
3) Issue standing orders for Police Dispatch to notify non-Block 50 Police facilities of impending rolling blackouts
4) Provide adequate flashlights and batteries for all non-Block 50 facilities
5) Train staff on their responsibility to assist the public in leaving any police facility experiencing a rolling blackout
6) Review all equipment in non-Block 50 facilities to ensure that it is not PG&E power dependent
- Telephones
- Alternate charging capability for radios
- Flashlights and regularly rotated batteries in all work areas and rest rooms
- Fire detection/protection equipment not dependent on PG&E power

- A plan for safe exiting during a power outage, in the event exiting is required

3. Department of Transportation

   a. Dispatch will
      1) Notify all field personnel in outage areas of impending rolling blackout
      2) Manage calls for streetlight and traffic signal outages as deferred calls until the power outage in that area is resolved

   b. DOT Field Operations will
      1) Support Police and Fire field response staff with barricades, delineators and other traffic devices, as needed
      2) Monitor sewage pumping station operation, including proper functioning of back-up power sources
      3) Coordinate with Emergency Public Information Officers to ensure timely notification of the public if sewage holding capacity is inadequate, or other public health related problems develop requiring community usage cutbacks

   c. DOT Administration will
      1) Ensure that field personnel have adequate equipment to operate safely in a rolling blackout area
         - Flashlights
         - Radios or cell phones that operate without PG&E power for recharge
         - Safety work lights for night operations that operate without PG&E power
      2) Ensure that there is a plan for notifying office staff in non-Block 50 facilities of impending blackouts, including placing signs on elevator doors notifying potential users of the rolling blackout timing
      3) Ensure that office staff in non-Block 50 areas have adequate equipment to operate safely in a rolling blackout area, including
         - Flashlights and regularly rotated batteries in appropriate work spaces (offices, break rooms, rest rooms)
         - Radios or cell phones that operate without PG&E power for recharge, or standard phone that does not require electricity to operate
         - Work lights for night operations that operate without PG&E power
         - Fire detection/protection equipment not dependent on PG&E power
         - A plan for safe exiting during a power outage, in the event exiting is required
      4) Ensure that employees in non-Block 50 facilities know the departmental response plan for rolling blackouts

4. Department of Environmental Services

a. Department of Environmental Services operations will
   1) Manage the WPCP in accordance with federal guidelines based upon locally generated alternate power
   2) Monitor loss of electricity impacts on critical water pollution control facilities
   3) Coordinate with Emergency Public Information Officers to ensure timely notification of the public if sewage processing capacity is inadequate, and water usage needs to be cutback

b. Department of Environmental Services Administration will
   1) Ensure that operations personnel have adequate equipment to operate safely in a rolling blackout area
      - Flashlights
      - Radios or cell phones that operate without PG&E power for recharge
      - Safety work lights for night operations that operate without PG&E power
      - Fire detection/protection equipment not dependent on PG&E power
      - A plan for safe exiting during a power outage, in the event exiting is required
   2) Ensure alternate power for critical laboratory functions
   3) Ensure that there is a plan for notifying office staff in non-Block 50 facilities of impending blackouts, including placing signs on elevator doors notifying potential users of the rolling blackout timing
   4) Ensure that safety equipment is maintained, including
      - Flashlights and regularly rotated batteries in appropriate work spaces (offices, break rooms, rest rooms)
      - Radios or cell phones that operate without PG&E power for recharge, or a standard phone that operates without electricity
        Work lights for night operations that operate without PG&E power
        Fire detection/protection equipment not dependent on PG&E power
        A plan for safe exiting during a power outage, in the event exiting is required
   5) Ensure that employees in non-Block 50 facilities know the departmental response plan for rolling blackouts

5. Emergency Public Information Officers

a. Emergency Public Information Officers will
   1) Be prepared to provide media releases regarding the impacts on City services of any power outages (e.g., closures of facilities, curtailment of sewage processing capacity)
   2) Be prepared to provide media releases on special services being provided to the community by the City to ameliorate power outage impacts (e.g., heat respite program)

3) Facilitate the preparation of on-camera experts for media interviews (e.g., ESD director re: WPCP, Fire Chief re: calls for services)
4) Facilitate the dissemination of public education materials on safety during a power outage (materials from PG&E, San Jose OES)
5) Develop a resource list for public information on the power outage: PG&E website, 24-hour phone contact numbers for the press at PG&E, 800 number for the public at PG&E
6) Ensure that PIO's with field responsibilities have adequate personal safety and support equipment appropriate to power outage situations (e.g., cell phone with non-PG&E power charger, flashlight, reflective safety vest)

6. City Call Center

a. City Call Center will
1) Be briefed on the power outage situation regularly by PIO's
2) Be provided with the resource list for public information on the power outage: PG&E website, 24 hour phone contact numbers for the press at PG&E, 800 number for the public at PG&E
3) Be provided with public information fliers related to personal safety during a power outage

b. Call Center Administration will
1) Ensure that staff knows that the Civic Center is in Block 50, so rolling blackouts will not occur
2) Ensure that staff understands that outages from accidental causes are not preventable and may result in loss of power
3) Ensure that Call Center staff members have appropriate safety equipment available
- Flashlights and regularly rotated batteries
- Radios or cell phones that operate without PG&E power for recharge
- Safety lights for night operations that operate without PG&E power
- Fire detection/protection equipment not dependent on PG&E power
- A plan for safe exiting during a power outage, in the event exiting is required

7. Department of General Services

a. General Services field staff will
1) Support the logistic needs of Police, Fire and other field operations departments
2) Plan for the continuous provision of garage, warehouse and other critical services during rolling blackouts through back-up power

3) Arrange for and maintain back-up power for other City departments, as requested
4) Ensure that exit lighting and smoke detectors/fire alarms are in good working order in all city owned facilities

b. General Services Administration will
1) Ensure that field personnel have adequate equipment to operate safely in a rolling blackout area
- Flashlights
- Radios or cell phones that operate without PG&E power for recharge
- Safety work lights for night operations that operate without PG&E power
2) Ensure that there is a plan for notifying office staff in non-Block 50 facilities of impending blackouts, including placing signs on elevator doors notifying potential users of the rolling blackout timing
3) Ensure emergency equipment is maintained in department facilities, including
- Flashlights and regularly rotated batteries in appropriate work spaces (offices, break rooms, rest rooms)
- Radios or cell phones that operate without PG&E power for recharge, or a standard phone that does not require electricity
- Safety lights for night operations that operate without PG&E power
- Fire detection/protection equipment not dependent on PG&E power
- A plan for safe exiting during a power outage, in the event exiting is required
4) Ensure that employees in non-Block 50 facilities know the departmental response plan for rolling blackouts
5) Ensure that emergency purchases can be made during power outages

8. City Departments that provide direct services to the public (PRNS, Library, etc.)

a. Departmental administration will
1) Select a Department senior staff member to receive the EDIS messages regarding rolling blackouts, and provide this information to appropriate facilities. (Ensure coordination with OES to get this person on the EDIS list.)
2) Ensure that public service personnel have adequate equipment to operate safely in a rolling blackout area
- Flashlights
- Radios or cell phones that operate without PG&E power for recharge, or a standard phone that does not require electricity
- Safety lights for night operations that operate without PG&E power
- Fire detection/protection equipment not dependent on PG&E power
- A plan for safe exiting during a power outage, in the event exiting is required
3) Ensure that there is a plan for notifying staff in non-Block 50 facilities of impending blackouts, including placing signs on elevator doors (and

external doors of city owned facilities) notifying potential users of the rolling blackout timing

4) Ensure that flashlights and regularly rotated batteries are maintained in appropriate work and public service spaces (offices, activity rooms, library stacks, break rooms, rest rooms)
5) Ensure that employees know if they are in non-Block 50 facilities, and know the departmental response plan for rolling blackouts

b. Departmental public service staff will
   1) Develop a plan for the safe evacuation of patrons from the facility during a blackout, including pre-event notification
   2) Ensure that any safety issues are addressed in advance of the blackout (e.g., materials or equipment in walk ways, any impediments to the exits are removed)
   3) Ensure that the facility can be properly secured during the outage
   4) Ensure that keys, codes and other requirements for re-entry are provided to all appropriate staff members
   5) Ensure that custodial staffs (childcare, elder care, etc.) are prepared to address the psychological needs of the customers/clients

9. City departments that do not provide direct services to customers

a. Departmental administration will
   1) Determine which departmental facilities are not in Block 50, and are subject rolling blackouts
   2) Select a Departmental senior staff member to be the point of contact to receive the EDIS messages regarding rolling blackouts, and ensure that the staff member coordinates with OES to get on the EDIS mail list
   3) Select a management staff member in each non-Block 50 facility to be the point of contact in the event of a rolling blackout to be notified by the Department
   4) Ensure that personnel have adequate equipment to operate safely in a rolling blackout area
      - Flashlights and regularly rotated batteries in appropriate work spaces (e.g., offices, break rooms, rest rooms)
      - Radios or cell phones that operate without PG&E power for recharge, or a standard phone that operates without electricity
      - Safety lights for night operations that operate without PG&E power
      - Fire detection/protection equipment not dependent on PG&E power
      - A plan for safe exiting during a power outage, in the event exiting is required

   5) Ensure that there is a plan for notifying office staff in non-Block 50 facilities of impending blackouts, including placing signs on elevator doors notifying potential users of the rolling blackout timing
   6) Ensure that flashlights and regularly rotated batteries are maintained in appropriate workspaces (offices, break rooms, rest rooms)

7) Ensure that employees in non-Block 50 facilities know the departmental response plan for rolling blackouts.

Attachment 4

PROCEDURES FOR CITY STAFF DURING POWER OUTAGES

The City of San Jose owns and rents workspaces throughout the City. Because the Airport and the Civic Center are part of Block 50, rolling blackouts will not occur there. Other City facilities may be in Block 50 due to proximity to hospitals or other critical facilities. Many freestanding City facilities are likely to experience rolling blackouts during the power crisis. Department heads must evaluate the situation of each facility to determine the best policy for response during rolling blackouts, with the safety of the staff members and patrons as the deciding factor in management decisions. Practical ability to perform work without power is also a consideration.

PLANNING/PRE-EVENT STAGE:

1. Every department head shall ensure that there is Emergency Response Team (ERT) members or trained disaster coordinators in every department facility. Training for new team members is coordinated through the City Safety Officer, Human Resources Department.

2. Every department head shall designate one Department Senior Staff member, and one backup, as the points of contact for power outage information. These people will coordinate with OES to ensure that they receive EDIS notifications directly via internet, and that they receive e-mail from the Operational Area via OES confirming outage blocks.

3. The Department head will determine exactly how employees will be notified of impending power outages at each worksite. E-mail, phone, signal (whistle, siren) or other technique may be used. The choice will vary with location and available equipment. Do not use the fire alarm unless there is a fire. Be sure to inform employees in advance, and to test the system in advance of the first outage, if possible.

4. Every department head shall obtain from General Services a list of all department facilities with the power block number to facilitate responding to rolling power outage notifications. S/he shall ensure that the designated points of contact have this information, that all supervisory employees have this information, and that the ERT members have the block number for their individual facility.

5. Every department head shall review the anticipated power outage impacts on their department work. Each shall consider the provision of alternate power supplies for critical activities, so that they may continue uninterrupted during rolling blackouts. Departments shall coordinate with General Services to arrange for the rental or acquisition of appropriate generators and fuel, batteries and chargers, UPS, or other such equipment. All Fire Code and other safety precautions shall be strictly observed.

6. Every department head shall determine which employees may safely continue their work during a rolling power outage, and which employees should be evacuated to a different location during a rolling blackout. Remember that traffic may be adversely affected by power outages that result in traffic signal outages. Employees shall be notified in advance of the anticipated response to a rolling blackout.

    a. Safety is the first consideration. Any staff members that cannot safely remain in their location without power should be evacuated while power is still available. Those in high-rise buildings should be evacuated because neither elevators nor restrooms will function, and alarm systems may not function. Those working in environments with hazardous materials or doing dangerous tasks should stop their work, ensure that all processes are in a safe mode, and leave the facility until power is restored.
    b. Lighting is an important element of safe operations. Any areas of a building that will be without adequate lighting for safe occupancy should be evacuated before the power goes out. Examples would include library stacks, interior rooms such as copy rooms and conference rooms, rooms without windows, and other areas without natural light sources.
    c. Practical ability to continue to accomplish work without power is a second consideration. Staff members whose only tasks involve the use of electricity powered equipment will have to be either reassigned to different work areas that have power, or cease work during rolling blackouts. In advance supervisors should determine if other useful work could be assigned during a rolling blackout, and ensure that items needed for these tasks are kept on hand. In any case, inadequate lighting will require the cessation of work and evacuation of staff.
    d. Determine where employees should relocate to continue working. Consider the length of time of the outage to determine if this is cost-effective, as travel time between work locations will add to the down time. If the outage is widespread and traffic signals are affected, travel conditions may militate against relocating employees. Ensure that every employee has information on the exact location in advance, and that they know what materials they will need to continue their work. Be sure to account for each employee who is directed to another work place both at their time of departure from their normal work location, and their time of arrival at the new work location. Repeat when they leave the temporary site and return to their normal work site. The City may have liability for their safety during the relocation process.
    e. Determine whether employees should evacuate during the outage. Be sure to account for each employee who is evacuated, and obtain an estimated destination for that employee during the evacuation and work cessation.
    f. Work with the City Attorney for possible reimbursement for lost time costs to the City, either from a responsible party or from business interruption insurance.
    g. Consider the work of field personnel, and determine whether a power outage in their fieldwork area would require them to stop work as a safety precaution or as a practical matter.
    h. Try to arrange the scheduling of work so that work product is not lost when the power is turned off. Arrange to shut off production equipment and electronics at least a few minutes in advance of the scheduled power outage.

NOTIFICATION STAGE:

CAISO has stated that it will provide 1/2-hour notice via EDIS of planned rolling blackouts. This information will lead to an actual outage about 50% of the time. When PG&E announces the blocks that have been staged, the Operational Area OES forwards this information to the cities. Department points of contact will receive information from City OES forwarded from information provided by the Operational Area, and shall ensure that supervisors:

1. Notify any employee covered by ADA of the anticipated loss of power, and initiate appropriate response to ensure the person's safety:
   a. In an elevator service building, all mobility impaired and visually impaired staff members shall be escorted to a safe waiting area on the first floor of the building with unimpeded exiting capability by an ERT member
   b. In a single story building, all mobility impaired and visually impaired staff members shall be escorted to a waiting area with unimpeded exiting capability by an ERT member

2. Notify patrons that services to the public will be curtailed during the announced rolling blackout period
   a. Request any patrons covered by ADA to complete their business expeditiously, or return after the blackout, and ensure that they reach a building exit before power is lost. This is especially important in elevator service buildings.
   b. ERT members shall post the exterior doors of buildings occupied by City staff members with placards indicating the service curtailment anticipated during the announced power outage.
   c. ERT members shall post signs near the elevator doors on the floors occupied by the City, and in the lobby, announcing the anticipated rolling blackout, and reminding people that the elevators will not function. Signs should also indicate applicable City service curtailment information.

ROLLING BLACKOUT STAGE:

Department points of contact will receive the EDIS message confirming the scheduled power blackout, and the notice of specific blocks from PG&E received through the Operational Area. Department points of contact will execute the power outage plan of their department. Employee notifications will proceed using the techniques predetermined in the planning period. Safety will be the first consideration in implementing the power outage plan.

ERT members will ensure the safe evacuation of persons covered by ADA, and any others needing assistance. They will monitor the outage, and notify the Department point of contact of restoration of power. A single incandescent light should be left on during the blackout to signal power restoration.

RESTORATION:

Power will not come on in all locations within a block simultaneously. Do not power up sensitive equipment (electronics, etc.) immediately, as there may be power surges. Ensure that all sensitive equipment is attached to a surge protector of appropriate size for the power drawn. Use caution in switching from alternate power back to PG&E power. Follow all safety codes and precautions.

1. Alternate power sources may be rotated among facilities based on the next outage blocks if such rotation is cost-beneficial.

2. Department heads shall ensure that all evacuated employees are accounted for once business is resumed. The Department Head shall immediately report to Risk Management any injuries, accidents, or other negative event related to the movement of personnel in the power outage. All appropriate and required documentation will be developed for each such event.

3. Each supervisor is responsible for appropriate time keeping during the power outage, ensuring that regular hours worked are counted correctly, based on Department policy. The Department Head shall maintain an accurate record of hours of work lost, together with direct and indirect costs to the City, in the event of the ability to collect damages or insurance settlements.

Department points of contact shall continue to carefully monitor the EDIS messages related to power outages. As there are only 14 power blocks, and several are generally used in every rolling blackout, it is possible that the same block could go out several times each month.

Attachment 5

PACIFIC BELL.

Jan. 17, 2001

CONSUMER ALERT

What if your power goes out?
Important reminders from Pacific Bell

With rolling blackouts now affecting California, some consumers may need to take a few precautions to make sure they do not lose telephone service.

Pacific Bell's telecommunications network remains fully operational during the rolling blackouts that California is now experiencing. Even if a Pacific Bell central office is hit by a blackout and loses commercial power, the phone network will continue to operate. That's because Pacific Bell's network has been designed and engineered with dependable back up power sources to ensure network reliability. The network is constantly monitored 24 hours a day.

There remains the possibility that customers lose phone service if they are using equipment depending on electricity. So Pacific Bell wants to be sure that its customers have emergency preparedness strategies and alternatives in place so they continue to receive calls and messages when there is no electrical power. Here are some reminders:

- **Make sure you have at least one telephone in your home and office that does not use an electrical outlet**. Cordless phones, while convenient, don't work in power outages. So customers should always have on hand a regular non-electrically powered telephone that can quickly plug into a telephone jack.

- **Don't count on answering machines during an outage.** Answering machines, and the telephones attached to them, depend on electricity and will not operate during a blackout. Pacific Bell Voice Mail for businesses, and The Message Center, Pacific Bell's residential voicemail, will be fully operational. You can continue to get calls and retrieve messages, and you can leave messages for others. Voicemail with pager notification has the capability to automatically notify you of each incoming call.

- **If you want to leave your home or office because of a blackout, use call forwarding to transfer calls to another location or PCS phone.**

- **Make sure you have a charged backup battery for your PCS phone.**

Businesses served by Pacific Bell Centrex will not lose telephone service in a blackout because the power is being supplied from the Pacific Bell central office. Customers using PBX equipment will suffer a loss of dial tone unless their systems are

equipped with backup capability. Businesses using PBX equipment should have backup plans for the rolling blackouts. This may include installation of Centrex for backup reliability.

Pacific Bell Internet supplies its own power, so during a blackout customers could continue with Internet access as long as they have battery power, or some other means, to supply power to their computers. Customers' Web sites will continue to be available.

DSL remains available, as long as computers have their own power source.

While Pacific Bell's redundant network will continue to process phone calls, it is possible other facilities could be temporarily affected by a blackout. Systems are in place so that calls to a facility such as a customer service center could be quickly re-routed to a separate center, with little impact on customers.

Media contact: Heather Alexander (916) 492-5303

Attachment 6

Blocks, Groups And Rolling Blackouts

I have received a number of calls regarding “blocks, groups and rolling blackouts” from members, government, and the public. From watching and reading the media it appear the stories and explanations have not been clear enough to explain these topics. I'm going to try to explain these concepts in more simple terms. Hopefully this explanation will make it a bit easier to understand.

Electricity and Power

Electricity is a commodity that for most practical purposes can't be stored. It has to be produced and consumed in 'real time'. For our system to work, Supply has to equal Demand. If we do not maintain this relationship, system frequency, which in this country is standardized at 60 Hz (hertz), will deviate from 60 Hz. Too much supply will result in an increase in system frequency and not enough will result in a decrease in system frequency. We try to maintain system frequency at 60.000 over a 24-hour period. Operating the system outside of small variations from 60 Hz can result in equipment damage at the customer as well as the utility end.

Often times when we refer to electricity we don't differentiate between power and energy. Power is typically expressed as megawatts (MW) or kilowatts (kw) and energy as megawatt-hours (MWH) or kilowatt-hours (kwh). A kilowatt-hour is simply one kilowatt of power over an hour's period of time and a megawatt-hour is similarly a megawatt over an hour's period of time. Generation and load or supply and demand is also often expressed in terms of kw or MWs.

Reserve margin and Electrical Emergency Declaration

You may have heard the term 'reserve' used regarding the electric system. In simple terms this is the amount of power that has to be available in order to meet the expected load. An analogy will help to illustrate this concept: while driving down the road at 70 mph you have depressed the accelerator in your car 50%-this is analogous to load; yet your car is capable of going 95 mph by depressing the accelerator 100%. The difference between the two is the 'reserve margin' that you hear so much about in relation to system emergency status. Typically the CAISO tries to maintain a 7% level of reserves in excess of the load. When the reserve margin falls or is expected to fall below 7% a Stage 1 Electrical Emergency is declared; a Stage 2 Electrical Emergency is declared when reserves fall or are expected to fall below 5% and a Stage 3 Electrical Emergency is declared when reserves fall or are expected to fall below 1.5%. Each of these stages triggers an increasingly rigorous level of activity ranging from a request to the General Public for voluntary conservation (Stage 1), shedding of interruptible customer load (certain customers that have signed up for lower rates in exchange for being interrupted) (Stage 2) up to involuntary rolling blackouts (Stage 3) for firm load (most customers).

The CAISO

At this point it is probably useful to take a few minutes to talk about the CAISO. Prior to deregulation, the electric industry was vertically integrated, i.e. the utility that provided service to a particular area was responsible for everything: generation, transmission, distribution and customer service. The utility was responsible for (its) system reliability. After deregulation and the creation of two new entities, the CAISO and the Power Exchange (PX), utilities were only responsible for distribution and customer service. Utilities were also required to purchase its energy (MWh) and capacity (MW) needs through the PX. Since the CAISO is responsible for system reliability, it acts as the purchaser of last resort and. The PX was supposed to function like a commodities market between the generators and the utilities and the CAISO assumed responsibility for system reliability and directing the operation of the Transmission System (ownership and operation of the transmission system remains with its original owners-the utilities). Note that Munis were not subject to the deregulation bill.

In operating the system, the CAISO makes projections of system load and accepts from Scheduling Coordinators balanced schedules (i.e., generation resources balanced with load consumption). In the event during real-time, that the actual load varies from what was scheduled, the CAISO determines the amount of "Balancing Energy" needs that exist. The CAISO fills these "Balancing Energy" requirements from energy that is offered through the PX market as "Supplemental Energy" or as energy that is associated with some Ancillary Service (i.e., Spinning or Regulation Reserve).

If insufficient energy is available then the CAISO, as the "buyer/provider of last resort", will purchase energy outside of the PX market process, to try to fill the gap between available scheduled energy supply and electrical demand (plus operating reserve margins). When reserves drop or are expected to drop below 1.5% (Stage 3 level) and insufficient capacity is available, the CAISO will issue a curtailment (for firm load) order to utilities to balance supply with demand. This curtailment order may impact different utilities differently. Some of the factors involved are availability of power (north, south), ability to move power through the intertie(s) and through some congested transmission corridors (such as Path 15, in the middle of the state). There may be other additional relevant local factors that apply.

Groups, Blocks and Blackouts

Once the CAISO has made a determination that it is necessary to curtail firm load, the curtailment is allocated to the utilities. It then becomes the utility's responsibility to implement the curtailment order. Let's look at a hypothetical case where the CAISO has made a determination that will require a total curtailment of 900 MW for 3 hours starting at 11:00AM. (Note that the numbers I have picked are arbitrary and have been chosen to illustrate a principle). Based on some of the factors discussed above, PG&E might be assigned 500 MW, SCE 300 MW and SDGE 100 MW curtailment responsibility for the duration of the order. (Although Munis are not generally participants in the CAISO, they may, as in the case of SMUD, be subject to CAISO action, such as curtailment orders, through existing contractual obligations).

The utilities are then responsible for effecting this load reduction by "turning off" (i.e. blackout) certain groups or blocks of customers the sum of whose load adds up to the utility's curtailment responsibility. Note that in California we have blackouts (power on/off); in locations outside California "brownouts" may be allowed to occur. Brownouts involve permitting the voltage to deteriorate up to a certain point instead of shedding (turning off) load.

For managing their rolling blackout programs, utilities combine groups of customers into approximately 100 MW (this can vary significantly from utility to utility) blocks. These groups of customers are referred to by different names depending on the utility: PG&E and SMUD call them "Blocks" and SCE calls them "Groups". The amount of time that it is planned that these customers would be turned off would typically be 1 hour, but that can also vary. Customer Blocks or Groups would be cycled off/on by the utility for the duration of the curtailment order to meet its curtailment obligation. Cycling these groups on/off is generally done in sequential order. A block that comes up on the rotation scheme would not be cycled again until it the utility has gone full circle on the list and its Block/Group number comes up again

So back to our example, in the case where PG&E would be required to curtail 500 MW, they would typically select 5 blocks of approximately 100 MW each and each block would be blacked out for one hour. At the end of that first hour they would be restored to service and the next set of 5 blocks would be turned off. Generally, there is some overlap in time between sets of blocks.

So what are the "protected" classes from rolling blackouts?

In a 1980 Decision, the CPUC established a priority scheme for Rotating Outages (see http://cueainc.com/members/Documents/MM0091.htm). This decision is applicable to Investor Owned Utilities (IOU) but not to municipal utilities (Munis). Under this system, certain end-uses were exempt from the rotating outage process. Not included in the exemption from rotating outages are those facilities that have adequate back-up generation (see http://www.cueainc.com/members/Documents/generatorexemption.htm). For example, a police station having adequate back-up generation would not be exempted from the rotating outage scheme while a similar police station without adequate back-up generation would be exempt from rotating outages. In many cases, facilities are required by other applicable rules, regulations (such as building codes, use permits, etc.) to install adequate backup.

Customers are typically surveyed by the utility when the service is initially started for the customer and periodically thereafter. Part of the information that is collected is the end-use (this is how they determine whether or not the facility qualifies under the exemption for rotating outage. They also collect information regarding customer's ability to provide its own back up. It is important to note that if this information is not correct or has changed over time, the facility might be incorrectly classified. For this reason, the customer needs to make sure that the utility has been provided the correct information. Customers need to work through the utility's commercial marketing organization or their utility assigned account representative to provide the utility with this information.

Based on the information gleaned from the survey, the utility aggregates circuits serving customers into Groups or Blocks typically adding up to about 100 MW. Each Group/Block is given an identifier and a sequential list of Groups/Blocks is established. When the utility receives a curtailment order from the CAISO, it will work down this list, and back again to the beginning once it gets to the end. It should be noted that each city will have many distribution circuits and that utility Groups/Blocks generally consist of distribution circuits that are not necessarily adjacent to each other.

As an example Block 5 for one of these utilities might have circuits A1, B2, C3, D4 in cities A, B, C, D; Block 6 has circuits A1, D2, F3, Q3 in cities A, D, F and Q. These cities could be close together or hundreds of miles apart. It is conceivable then, that if you and your neighbor are on different blocks, that your power could go off and his stay on and at a later time the reverse to take place.

I should explain that exempting one customer on a circuit from rotating outages has the impact of exempting everybody else on the circuit. As a result, a utility might have as much as 40% of its load "excluded" from rotating outages. Utilities do not have the ability to individually turn on/off customers by remote control; they can only do so for circuits. Each utility has different ability of “remotely” turning off customers and in fact, may have to rely on manually turning off the circuits. You can appreciate the burden that this places on the utility as it tries to comply with the curtailment order and the imposition on non-exempted customers as a result of being rotated more often than they might otherwise be, often under some very stringent time constraints.

We’ve covered in this document some concepts regarding electricity, the role of the CAISO, Groups/Blocks and rotating blackouts. I hope that this information has helped to clarify some of the confusion.

Please call me at 916-464-3229 or e-mail me at al_Garcia@oes.ca.gov if you have any questions.

Al Garcia